

REMARKS/ARGUMENTS

Claims 17-35 remain pending in the instant application. Favorable reconsideration is kindly requested.

Rejection under 35 U.S.C. § 103

Claims 17-20, 22 and 25 are rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,129,608 to Cyrus, *et al.* ("Cyrus") taken alone. Applicant respectfully traverses the rejection, for at least the following reasons.

Independent claim 17 recites a toy building block comprising, *inter alia*, at least one stud with a plurality of circumferentially arranged, substantially equally spaced teeth with rounded crests and interspersed rounded grooves, and a bottom surface of the block having at least one recess with sidewalls, at least one sidewall of the recess having a substantially vertically extending land shaped complementary to and extending into a respective one of the rounded grooves of the stud. The Office Action avers that Cyrus teaches this feature. Applicant respectfully disagrees.

Cyrus relates to a system for building play terrains (e.g., Fig. 1, 2). For elevations, building blocks are used which may be stacked to create columns (e.g., Fig. 4). However, e.g., Fig. 5, a block has quite low clover-shaped stud-structures on its top surface and one quadratic opening in its bottom. The lower ends of the sidewalls constitute the opening. As a consequence, it is only the entirety of all four studs on the top surface that may safely engage in the bottom opening and create a friction engagement. One single stud may, of course, protrude in the opening (e.g., Fig. 11A). However, Cyrus provides no land capable to engage in one of the rounded grooves of the stud, as recited in claim 17.

To the extent that the bottom 18 of one block receives the studs 20 of another therein, they are held only at the crests of the studs by the sidewalls 14. There is no portion of Cyrus' block that is disclosed to lie within the recesses of the stud 20 of an inserted block. Cyrus therefore lacks at least this feature of claim 17. This lack of lands in the underside of the block engageable in the rounded grooves of the stud is even more distinguishing with respect to claims 18 and 19. There being no part of the Cyrus block underside inserted into the recessed grooves, there cannot be either three such lands, nor can such lands comprise a majority of the contact zones.

Furthermore, claim 17 recites “the stud having a height extending above the top surface of the block by at least about 30% of the height of the block”. Regarding the height of the stud, Fig. 16 of Applicant’s disclosure illustrates that the claimed height is provided to avoid toppling or even significant tilting of an upper block taking duly into account that the building blocks according to the invention may be easily assembled and disassembled without a clamping resistance known from similar systems having rather low studs.

The Office Action acknowledges, as it must, that this feature is neither taught nor suggested in Cyrus. However, the Office Action then persists in the assertion, again without any support from the reference, that it would have been obvious to modify the height of the projections 20 in Cyrus to achieve this feature of claim 17. Applicant respectfully disagrees.

Cyrus depicts a low rising stud 20 (Fig. 5), by visual approximation from the figures at most 10% of the height of the block. There reference is completely silent on the benefits to be derived height of the stud, and gives one of ordinary skill in the art no hint that substantially increasing the height of the stud 20, has any substantive impact on the interlocking of the blocks. Optimizing a variable within a known range is only obvious where the prior art teaches that the variable in question is result-effective. *In re Boesch*, 617 F2d 272 (CCPA 1980). *See also*, M.P.E.P. § 2144.05(II)(B), 8th Ed., Rev. 6 (Sept. 2007). That is not the case here. The Office Action points to no teaching or suggestion in Cyrus (nor elsewhere) that the height of the projections is a known result-effective variable.

Therefore, the Office Action sets forth no apparent reason for one of ordinary skill in the art to seek to alter the height of the studs 20 in Cyrus to achieve the values of stud height recited in claim 17. It is not an “optimization” of Cyrus as suggested in the Office Action, there being no apparent benefit to be gained by such “optimization”. Applicant respectfully submits that controlling Federal Circuit precedent contravenes the Examiner’s position. An obviousness rejection based solely upon hindsight reconstruction remains impermissible. *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 421 (2007)¹.

For any of the foregoing reasons, Applicant respectfully submits that independent claim 17 is patentably distinguished over Cyrus. Claims 18-20, 22 and 25 each depend, either directly

¹ “...[I]n order to determine whether there was an apparent reason to combine the known elements in the fashion claimed To facilitate review, this analysis should be made explicit. *See In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there

or indirectly, from independent claim 17. These dependent claims are each separately patentable, but in the interest of brevity, they are offered as patentable for at least the same reasons as their underlying independent base claim, the features of which are incorporated by reference. Therefore, Applicant respectfully submits that the rejection has been overcome, and kindly requests favorable reconsideration and withdrawal.

Claim 21 is rejected under 35 U.S.C. §103(a) as obvious over Cyrus as applied to claim 17, and further in view of U.S. Patent No. 3,487,579 to Brettingen ("Brettingen"), German Publication No. DE 35 03 211 A1 by Fischer ("Fischer") and U.S. Patent No. 4,582,495 to Orgrass, *et al.* ("Orgrass"). Applicant respectfully traverses the rejection, for at least the following reasons.

The Office Action again cites to Brettingen and/or Orgrass as having 6-, 8- or 12-fold rotational symmetry, and therefore comes to the conclusion that it would have been obvious to modify Kushner to have 6-, 8-, or 12- fold rotational symmetry. Applicant respectfully disagrees.

The functional considerations militating against combining the teachings of Brettingen and/or Orgrass as proposed in the Office Action apply with equal weight to the Cyrus references as they did to the Kushner reference before. The Fischer reference is merely duplicative of, for example, Orgrass with respect to the shape of the stud. Applicant notes that the prior remarks illustrating why such a proposed combination would be unworkable, and therefore non-obvious, were not addressed in the most recent Office Action. Notably, that any or all of Brettingen, Orgrass or Fischer have structure that may be construed as a "stud" does not speak the unworkability of such studs when combined with the base reference Cyrus. Therefore Applicant's comments are repeated in substance, for the convenience of the Examiner.

The underlying Cyrus reference discloses a square block with, at most, 4-fold rotational symmetry. As illustrated in Fig. 5 of Cyrus, the block is held against rotation once engaged by the interaction of the vertical sidewalls 14 with the studs 20. More specifically, two adjacent sidewalls at right angles to one another act on the stud 20 (e.g., Fig. 11A) which are roughly at the extreme corners of the block, to hold the block against rotation. If one of ordinary skill in the

must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")." *Id.*

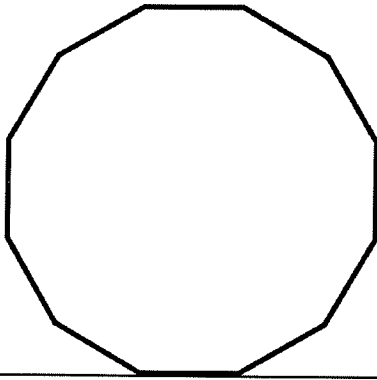


Figure 1 - 12-Sided Dodecagon

art wished to, as the Office Action proposes, modify an entire block to include additional multiples of rotational symmetry, for example a hexagonal form as in Brettingen; the included angles between the adjacent walls would increase from a 90-degree right angle to a 120-degree reflex angle. This flattening of the included angle would decrease the hold the sidewalls 2 have on the projections 10, and thus decrease the rotational stability of a two-block unit. Going further to octagonal for 8-fold symmetry or dodecagonal for 12-fold symmetry increases

the included angle between adjacent walls to 135 degrees and 150 degrees, respectively. A dodecagon is nearly circular, and would exhibit little to no rotational hold on the studs 10. Therefore, one of ordinary skill in the art would be motivated away from the proposed modification to decrease the rotational stability of the building block proposed in the Office Action. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)

Considering on the other hand, the stud as disclosed in Orgrass or Fischer, a similar deficiency inures to the proposed combination. By modifying the stud to be more circle-like, the base reference Cyrus becomes less resistant to rotational forces. The interaction between the projection 10 and the sidewall 2 is moved away from the corners of the block towards the centers of the sidewall 2. The angle of interface between the sidewall 2 and the projection 10 is thus made nearly oblique, as to virtually eliminate any rotational resistance between the blocks. One of ordinary skill in the art would be motivated away from such a modification that would undermine an important function of the block. "If when combined, the references 'would produce a seemingly inoperative device,' then they teach away from their combination." *Tec Air Inc. v. Denso Manufacturing Michigan Inc.*, 192 F.3d 1353, 52 USPQ2d 1294 (Fed. Cir. 1999).

Therefore, Applicant respectfully submits that one of ordinary skill in the art would be motivated away from combining the references as proposed in the Office Action, and that the rejection of dependent claim 21 is poorly taken. Favorable reconsideration and withdrawal of the rejection is kindly requested.

Claims 23 and 24 are rejected under 35 U.S.C. §103(a) as obvious over Cyrus in view of U.S. Patent No. 6,088,987 to Simmons, *et al.* ("Simmons"). Applicant respectfully traverses the rejection.

In the case of the Rejection including Simmons, the Office Action has addressed Applicant's arguments and these comments are directed specifically to those (p. 19).

Applicant's assessment of the Simmons teachings is well grounded in the prior art. The LEGO blocks, which Simmons compares itself and models itself, are indeed plastic, and indeed rely on friction to hold one block to another. By contrast, the full size Simmons blocks employ the threaded rods, holes and caps, which are the features cited by the Office Action in support of its rejection. Taking the Simmons teachings at face value, one would expect the miniature models to have the same basic shape of the counterpart full-size blocks, but to be held to one another as LEGO block, i.e., by friction without the need for the holes, caps, and/or threaded rods.

The Office Action seems incredulous that there might be any differences between the full-size blocks and the miniature models (p. 20). However, the full size blocks are not disclosed to have model numbers cast into them, as the miniatures are. Therefore it seems clear that at least some deviation between the models and the full size blocks is indicated and indeed warranted. Among those deviations are the manner in which the blocks are secured to one another, in the case of the full size blocks by the threaded rods and caps that the office Action cites to, but in the case of the miniatures by friction.

Finally, the Office Action takes issue with Applicant's assertion that the miniature blocks are taught by Simmons as disclosed as temporary implements, intended to be deconstructed after a suitable model is arranged (Office Action, pp. 19-20). *Contra*, Simmons, Col. 6, lines 22-25 ("This identification system **allows a builder or designer to disassemble a scale model** of a constructed design and produce an exact bill of materials required for the actual construction project,") (emphasis added).

Therefore, Applicant respectfully submits that the proposed combination of Cyrus and Simmons is also poorly taken. In any case, the proposed addition of Simmons does not overcome the deficiencies of Cyrus with respect to underlying independent claim 17 as noted above. Favorable reconsideration and withdrawal of the rejection is kindly requested.

Claim 26 is rejected under 35 U.S.C. §103(a) as obvious over Kushner as applied to claim 17 and further in view of U.S. Patent No. 5,725,411 to Glynn (“Glynn”). Applicant respectfully traverses the rejection.

Applicant respectfully submits that claim 26 is patentably distinguished for at least the same reasons as its underlying independent base claim 17, the features of which are incorporated by reference. Glynn offers no teaching or suggestion to ameliorate the deficiencies of Cyrus, nor is it alleged to.

However, and without prejudice to the rejection, or acquiescing in its propriety, dependent claim 26 is amended above to recite “at least one slot penetrating the lateral outer face from one side of the lateral outer face to an opposite side,” (markup per 37 C.F.R. § 1.121). No new matter has been added. This feature is neither taught nor suggested by Glynn.

Therefore, Applicant respectfully submits that the claim as amended is patentably distinguished over the proposed combination of Cyrus and Glynn. Favorable reconsideration and withdrawal of the rejection is kindly requested.

Claim 27 is rejected under 35 U.S.C. §103(a) as obvious over Cyrus as applied to claim 17 and further in view of U.S. Patent No. 6,506,091 to Garpow (“Garpow”). Applicant respectfully traverses the rejection, for at least the following reasons.

Claim 27 was amended above to recite, “the block comprises a bivalent building block having at least one of the recesses on the top surface and the bottom surface”. The claim had always referred to “at least one of the recesses”, invoking the underlying features of claim 17. As clarified, the amended claim recites the block includes a recess having the same features on its top and bottom surface.

By contrast, Garpow does not teach or suggest that a block includes recess having the same features on both a top and bottom surfaces. Rather, at most Garpow discloses a block having a removable stud 40 that screws into the block 20, and that the a hollow interior of the block 20 can be accessed through the threaded opening 47. On the other hand, an underside of the block includes recesses 70, 80, 90. There is no teaching or suggestion in Garpow that opposite sides of the block includes like recesses that are operative to receive a stud in either of them.

This point was made in Applicant's previous response, and was in fact agreed upon in the interview (See Applicant's Nov 15, 2010 Interview Summary). The Office Action offers no reason for its reversal, or acknowledgement of the prior agreement.

However, in light of the prior amendment and the foregoing remarks, and consistent with the agreement reached in the telephone interview, Applicant respectfully submits that claim 27 is patentably distinguished over Cyrus and/or Garpow, singly or in combination. Favorable reconsideration and withdrawal of the rejection is kindly requested.

Claims 28-29 are rejected under 35 U.S.C. §103(a) as obvious over Cyrus in view of Simmons as applied to claim 23 and further in view of U.S. Patent No. 2,609,638 to Lindenmeyer ("Lindenmeyer"). Claim 30 is rejected under 35 U.S.C. §103(a) as obvious over Cyrus in view of Lindenmeyer as applied to claim 28, and further in view of Garpow. Claim 31 is rejected under 35 U.S.C. §103(a) as obvious over Cyrus in view of Simmons and Lindenmeyer as applied to claim 28, and further in view of U.S. Patent No. 5,498,188 to Deahr ("Deahr"). Claims 32 and 33 are rejected under 35 U.S.C. §103(a) as obvious over Cyrus in view of Simmons as applied to claim 23 and further in view of Garpow. Claims 34 and 35 are rejected under 35 U.S.C. §103(a) as obvious over Cyrus in view of Simmons and Lindenmeyer as applied to claim 28, and further in view of Garpow. Applicant respectfully traverses the rejection for at least the following reasons.

Each of claims 28-35 depends, either directly or indirectly, from claim 17 though claim 23, and incorporates by reference the features of their underlying base claims. Without prejudice to the deficiencies of Garpow addressed above and overcome by the prior amendment to claim 27, the proposed addition of Lindenmeyer, Deahr, and/or Garpow offers no teaching or suggestion to ameliorate the underlying deficiencies of Cyrus with respect to claim 17, nor Cyrus and Simmons with respect to claim 23, both of which are discussed above. Therefore, while claims 28-35 are each separately patentable, there are respectfully submitted as patentable for at least the same reasons as their underlying base claims 17 and 23. Applicant respectfully submits that the rejection has been overcome, and kindly requests favorable reconsideration and withdrawal.

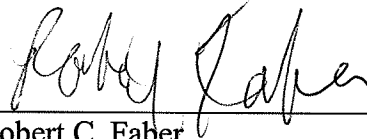
Conclusion

In light of the foregoing, Applicant respectfully submits that all claims are patentable, and kindly solicits an early and favorable Notice of Allowability.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE PATENT AND
TRADEMARK OFFICE EFS FILING
SYSTEM ON April 13, 2011.

RCF/DJT:lf

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert C. Faber", is written over a horizontal line.

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